

WHAT IS CLAIMED IS:

1. A data transfer apparatus which is connected to another device via a communication path having a predetermined number of transfer channels, comprising:

5 adjustment means for adjusting channel assignment to limit a sum of the number of channels required for new data transfer and the number of already assigned channels to a value not more than the predetermined number, when the sum exceeds the predetermined number
10 upon executing data transfer between the devices; and
assignment means for assigning channels, the number of which is adjusted by said adjustment means, to the device that transfers data.

2. The apparatus according to claim 1, wherein said
15 adjustment means decreases the number of channels to limit the sum to a value not more than the predetermined number by reducing a data transfer rate of the device to which channels have already been assigned, when the sum of the number of channels required for new data transfer
20 and the number of already assigned channels exceeds the predetermined number.

3. The apparatus according to claim 1, wherein said adjustment means decreases the number of channels to limit the sum to a value not more than the predetermined
25 number by reducing a data transfer rate of new data transfer, when the sum of the number of channels

required for new data transfer and the number of already assigned channels exceeds the predetermined number.

4. The apparatus according to claim 1, wherein said adjustment means assigns empty channels to a device
5 which requests new data transfer, and adjusts channel assignment when the number of assigned channels does not reach the number of channels required for data transfer.

5. The apparatus according to claim 1, wherein said adjustment means adjusts the number of channels assigned
10 to the devices connected via the communication path.

6. The apparatus according to claim 1, wherein the plurality of devices include a computer and image scanning device.

7. The apparatus according to claim 1, wherein the
15 plurality of devices include a computer and image forming device.

8. The apparatus according to claim 1, wherein the communication path is a one for transferring data in isochronous mode specified in-IEEE1394.

20 9. A method of controlling a data transfer apparatus which is connected to other devices via a communication path having a predetermined number of transfer channels, comprising:

the adjustment step of adjusting channel
25 assignment to limit a sum of the number of channels required for new data transfer and the number of already

assigned channels to a value not more than the predetermined number, when the sum exceeds the predetermined number upon executing data transfer between the devices; and

5 the assignment step of assigning channels, the number of which is adjusted by said adjustment means, to the device that transfers data.

10. The method according to claim 9, wherein the adjustment step includes the step of decreasing the
10 number of channels to limit the sum to a value not more than the predetermined number by reducing a data transfer rate of the device to which channels have already been assigned, when the sum of the number of channels required for new data transfer and the number
15 of already assigned channels exceeds the predetermined number.

11. The method according to claim 9, wherein the adjustment step includes the step of decreasing the
20 number of channels to limit the sum to a value not more than the predetermined number by reducing a data transfer rate of new data transfer, when the sum of the number of channels required for new data transfer and the number of already assigned channels exceeds the predetermined number.

25 12. The method according to claim 9, wherein the adjustment step includes the step of assigning empty

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channels to a device which requests new data transfer,
and adjusting channel assignment when the number of
assigned channels does not reach the number of channels
required for data transfer.

5 13. The method according to claim 9, wherein the
adjustment step includes the step of adjusting the
number of channels assigned to the devices connected via
the communication path.

10 14. The method according to claim 9, wherein the
plurality of devices include a computer and image
scanning device.

15 15. The method according to claim 9, wherein the
plurality of devices include a computer and image
forming device.

16. The apparatus according to claim 9, wherein the
communication path is a one for transferring data in
isochronous mode specified in IEEE1394.

17. A storage medium that stores a program for making
a computer, which is connected to other devices via a
20 communication path having a predetermined number of
transfer channels, function as:

adjustment means for adjusting channel assignment
to limit a sum of the number of channels required for
new data transfer and the number of already assigned
25 channels to a value not more than the predetermined

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number, when the sum exceeds the predetermined number upon executing data transfer between the devices; and

assignment means for assigning channels, the number of which is adjusted by said adjustment means, to
5 the device that transfers data.

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